



Virtual Campus Hub technology

Virtual Campus Hub D5.3

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Deliverable 5.3 - Virtual Campus Hub technology

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2011-2



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1 Introduction

The research infrastructure project Virtual Campus Hub (VCH) runs from October 1, 2011 to September 30, 2013. Four technical universities in Europe, who are all active in the field of sustainable energy, form the project consortium: the Technical University of Denmark, The Royal Institute of Technology in Sweden, Politecnico di Torino in Italy, and Eindhoven University of Technology in the Netherlands. The project is partially funded by the European Commission under the 7th Framework Programme (project no. RI-283746).

This deliverable briefly describes which technological components have been delivered for the Virtual Campus Hub and how they can be used. A detailed discussion of the technical details of the components, how they were realized and how they fit the VCH concept can be found in deliverables *D5.4. Virtual Campus Hub Technology Evaluation Report* and *D6.7 The Virtual Campus Hub Concept*.

2 Technical components of the VC Hub

In this chapter, an overview is given of the functionalities realized (end user, infrastructure and presentation functionalities).

2.1 Identity providers (IdPs)

At this moment, the following IdPs have been connected to the Virtual Campus Hub (see also figure 1 below):

1. Eindhoven University of Technology (TU/e)
2. Royal Institute of Technology, Stockholm (KTH)
3. Technical University of Denmark (DTU) through WAYF (DK)
4. FEIDE OpenIdp (NO) for guest accounts¹
5. OneGini for access through social network accounts (Google, Facebook, Twitter and LinkedIn)²
6. SURFguest (NL) for guest accounts
7. SURFnet (NL) for testing purposes
8. GARR (IT) for testing purposes

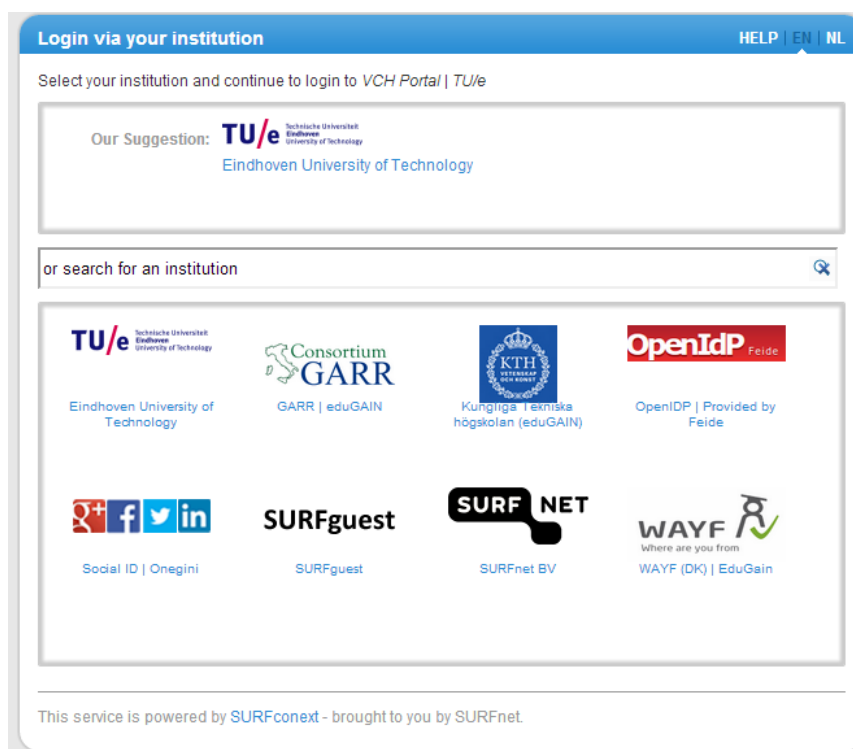


Figure 1. The logon screen where the federated user needs to select his IdP

To login, a user selects one of the IdPs for which he has a valid account and then clicks this IdP. The selected IdP's local logon screen appears after which credentials can be entered. In case of a guest IdP, a guest account must first be created.

¹ <https://openidp.feide.no>

² <http://www.onegini.me>

2.2 Service providers / applications (SPs)

2.2.1 Portal

The Virtual Campus Hub portal (<https://vch.tue.nl>) is a simple website (.NET, IIS) with (single sign-on) deeplinks to the services (applications) provided by the VCH project (see figure 2 below):

1. DTU course on wind energy (itslearning):
<https://www.itslearning.com/elogin/autologin.aspx?CustomerId=1956>³
2. TU/e collaboration environment (MS Sharepoint): <https://vchcollaboration.tue.nl>
3. KTH remote cascade lab: <https://egiswamid.egi.kth.se/secure>⁴
4. PoliTo StartApp: <http://toce.polito.it/vchub>⁵
5. My Virtual Campus Hub group memberships (SURFteams):
<https://teams.surfconext.nl/teams/home.shtml?view=gadget>

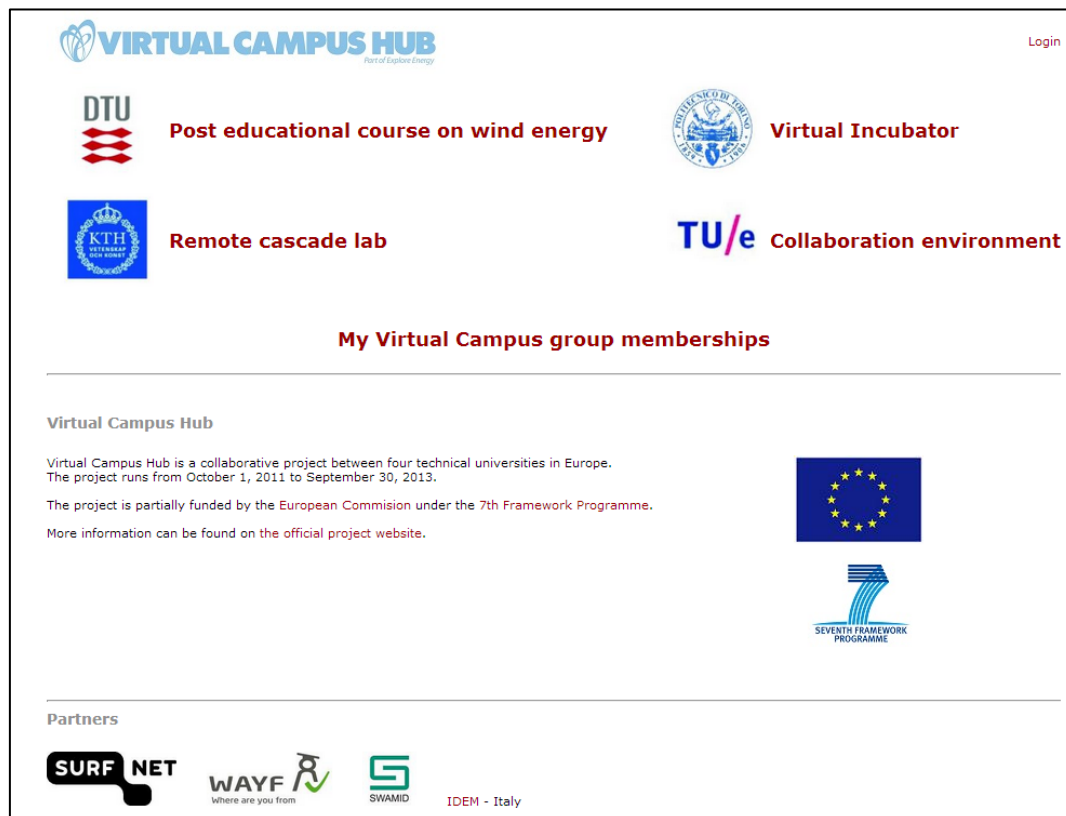


Figure 2. The Virtual Campus Hub portal site

All of these services can exist independent of the portal, incl. the federated login (if they have been connected to the VCH infrastructure). In fact, if a user goes directly to the URL belonging to a service,

³ This URL only allows federated login to the itslearning service, i.e. through one of the IdPs connected to VCH. An alternative URL, <https://www.itslearning.com/elogin/default.aspx?CustomerId=1956>, enables users to choose either for the federated login or for login with an itslearning account.

⁴ Connection to VCH not realized during the project. Information on the remote cascade lab can be found at http://www.energy.kth.se/proj/projects/Remote_labs/RL/RL_website/RCL/RCL.html

⁵ Connection to VCH not realized during the project. Information on the StartApp can be found in deliverable D4.3. e-Link evaluation report.

the same federated login procedure will be used as when logging on to the portal. What the portal does is to present all links on one page, so a user does not need to search for all these links. The single sign-on feature is provided by SURFconext and is not part of the VCH portal itself.

2.2.2 DTU course on wind energy (itslearning)

Connected to VCH via SURFconext (NL), which connection is to be migrated to WAYF (DK) once WAYF is able to connect services to eduGAIN. Itslearning⁶ is an external cloud service, which is therefore not hosted at DTU premises. To realize the federated login, an extra attribute⁷ has been added to the itslearning configuration.

To access the DTU course on wind energy, the DTU itslearning administrator needs to register the user in itslearning first. To enable federated login for this user, the extra attribute (see above) must be filled. The user then still has the possibility to login both with his federated credentials or with the associated itslearning account (with different credentials). See figure 3.

Figure 3. Federated login via Virtual Campus Hub or regular login via an itslearning account

⁶ <http://www.itslearning.com>

⁷ The added attribute is eduPersonPrincipleName (ePPN), see <https://wiki.surfnet.nl/x/bQEWAg#AttributesinSURFconext-Principlename> and <http://middleware.internet2.edu/eduperson/docs/internet2-mace-dir-eduperson-201203.html#eduPersonPrincipleName>. In case of SURFconext, ePPN = userID@institution, e.g. username@dtu.dk.

Once logged in the DTU course on wind energy becomes available for the federated user (figure 4).

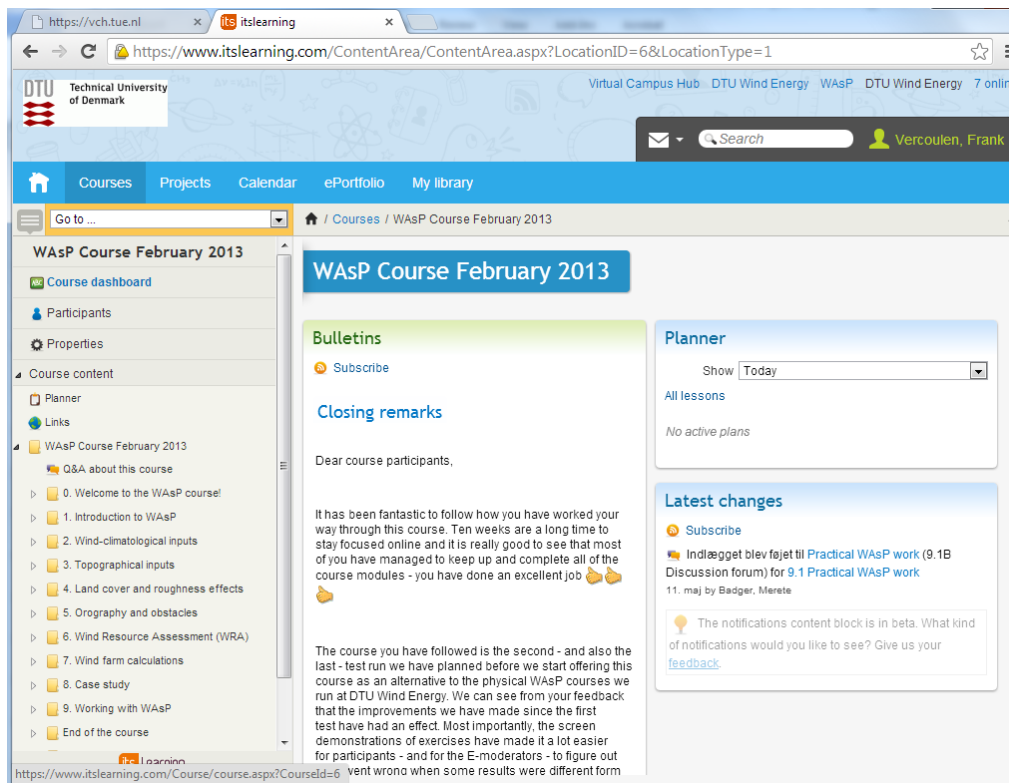


Figure 4. Federated access to the DTU course on wind energy

2.2.3 TU/e collaboration environment (MS Sharepoint)

Connected via SURFconext, including a connection with the group management service (SURFteams) in SURFconext⁸.

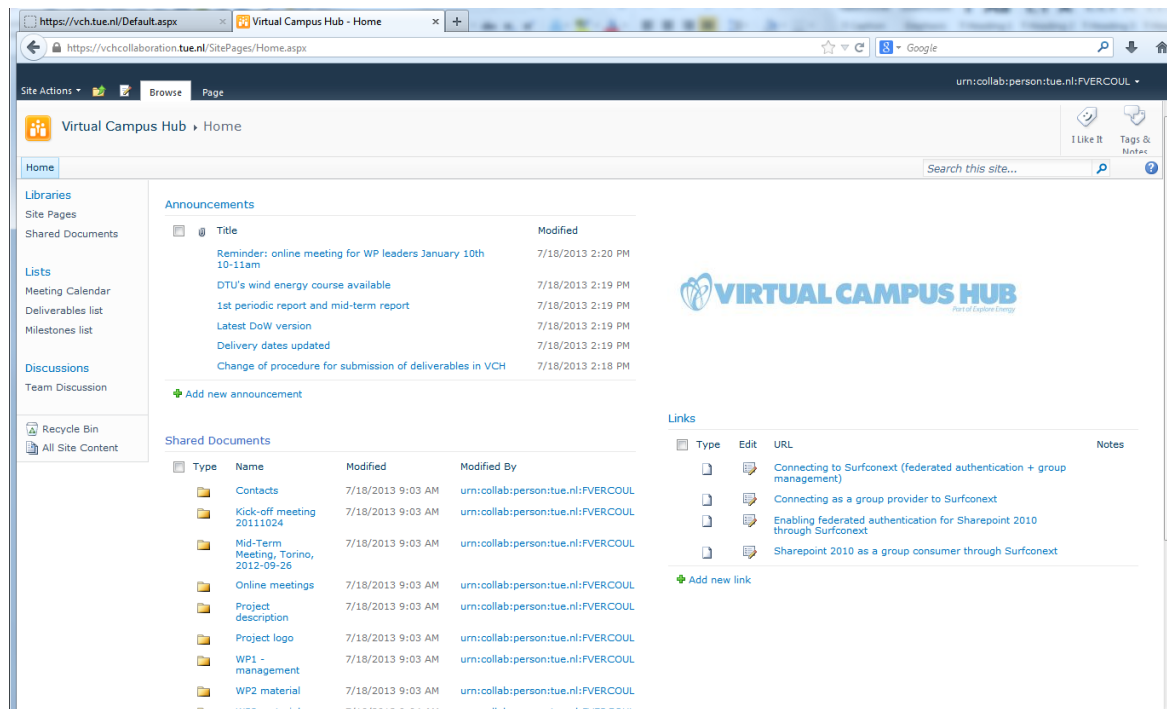


Figure 5. Federated access to TU/e collaboration environment (MS Sharepoint)

Because of this integration with the group management service, users do not need to be registered separately in MS Sharepoint. Once they are member of the relevant group (see below), the list of federated users in MS Sharepoint can be refreshed via the plugin that connects MS Sharepoint with the group management service (SURFteams). See figure 6 below. Depending on which access rights these users should be assigned, (a selection of) federated users can be placed in one or more MS Sharepoint groups (in this case VCH Owners, VCH Contributors or VCH Reviewers, see figure 6) or given individual access rights. In this way, access rights for federated users can be assigned in a flexible way using the external group information from SURFteams. However, it also means that federated users must be member of one of the relevant SURFteams to be able to access the applicaton.

⁸ Group management plugin for MS Sharepoint: <https://wiki.surfnetlabs.nl/display/surfconextdev/Microsoft+SharePoint+as+a+group+consumer>

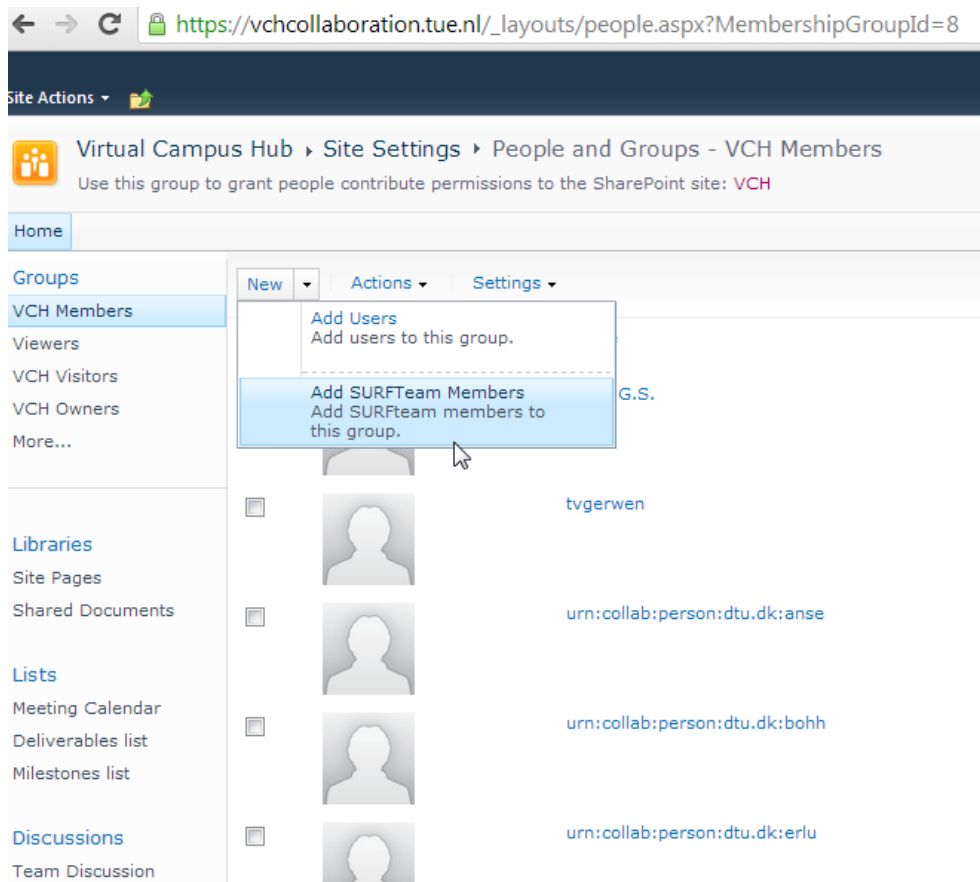
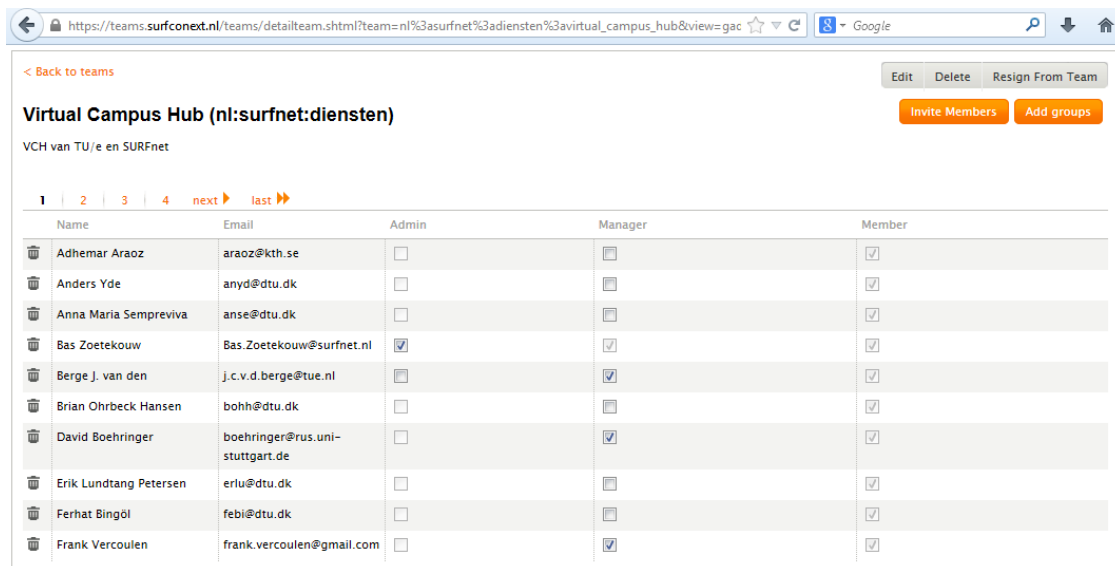


Figure 6. Providing access to federated users in MS Sharepoint via SURFteams

2.2.4 Group management (SURFteams)

Connected via SURFconext (in fact, part of SURFconext). Once a group is created in SURFteams, members are invited by email. By clicking a link in the email or by going directly to the SURFteams application in the VCH portal (*My virtual campus group memberships*), a user then decides through which IdP he will become member of this group. That is done by logging on to this IdP (so the user must have a valid account at this IdP) and then accept the invitation (or decline it). Once accepted, his membership of the group can be used to provide direct access to applications. For the VCH proof of concept, one ad hoc group, Virtual Campus Hub, was created.



Virtual Campus Hub (nl:surfnet:diensten)

VCH van TU/e en SURFnet

Name	Email	Admin	Manager	Member
Adhemar Araoz	araoz@kth.se	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
Anders Yde	anyd@dtu.dk	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
Anna Maria Semprevia	anse@dtu.dk	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
Bas Zoetekouw	Bas.Zoetekouw@surfnet.nl	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>
Berge J. van den	j.c.v.d.berge@tue.nl	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>
Brian Ohrbeck Hansen	boh@dtu.dk	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
David Boehringer	boehringer@rus.uni-stuttgart.de	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>
Erik Lundtang Petersen	erlu@dtu.dk	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
Ferhat Bingöl	febi@dtu.dk	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
Frank Vercoulen	frank.vercoulen@gmail.com	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>

Figure 7. Federated access to the group management service (SURFteams)

2.2.5 KTH remote cascade lab

Attempts to connect have not been successful yet. Therefore the link to the remote cascade lab applications is not working yet⁹.

2.2.6 PoliTo StartApp

The StartApp was not connected to VCH. Therefore the link to the StartApp is a simple URL without federated authentication¹⁰.

⁹ Connection to VCH not realized during the project. Information on the remote cascade lab can be found at http://www.energy.kth.se/proj/projects/Remote_labs/RL/RL_website/RCL/RCL.html

¹⁰ PoliTo StartApp: <http://toce.polito.it/vchub>

3 Using the Virtual Campus Hub

3.1 Create a guest account (if needed)

In case you are not member of one of the regular IdPs connected (see §2.1), a guest account is needed. This guest account can be created at FEIDE OpenIdP (NO) via <https://openidp.feide.no>. Once you created your guest account, you will be able to login to the VCH portal at <https://vch.tue.nl>.

3.2 Become a member of the Virtual Campus Hub team

To become member of the SURFteam Virtual Campus Hub, you must be invited by email. Send a request to try out the Virtual Campus Hub portal to your VCH contact person and state the email address you wish to use to access the VCH portal.

Via your VCH contact person, you will be invited for the Virtual Campus Hub team. You can accept the invitation in two ways:

1. Click the link in the email you received, login through the IdP of your choice (and for which you have a valid account) and accept the invitation via the tab *My Invitations*.
2. In the VCH portal, click *My Virtual Campus Hub group memberships*, login through the IdP of your choice (and for which you have a valid account) and accept the invitation via the tab *My Invitations*.

3.3 Get access to the VCH applications

To get single sign-on access to the two applications connected to VCH (DTU course on wind energy and TU/e collaboration environment), you need to do two more things:

1. Inform your VCH contact person that you accepted the invitation for the Virtual Campus Hub team.
2. Go to <https://profile.surfconext.nl>, login via your IdP and write down the value of the parameter "Net-ID"¹¹. Send this value to your VCH contact person.

Now your VCH contact person will update the VCH group information in the TU/e MS Sharepoint environment (see §2.2.3) and will create an account for you in the DTU itslearning system (see §2.2.2). After that has been done, you will receive a message that you can access the VCH applications.

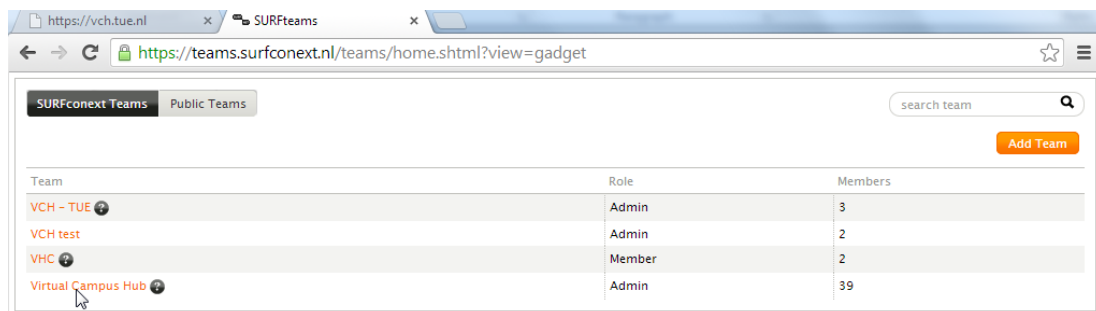
¹¹ In fact, this is the attribute added to the itslearning configuration to realize federated login. This attribute is the same as eduPersonPrincipleName (ePPN), see <https://wiki.surfnet.nl/x/bQEWAg#AttributesinSURFconext-Principlename> and <http://middleware.internet2.edu/eduperson/docs/internet2-mace-dir-eduperson-201203.html#eduPersonPrincipalName>. In case of SURFconext, ePPN = userID@institution, e.g. username@dtu.dk.

3.4 Manage the VCH environment

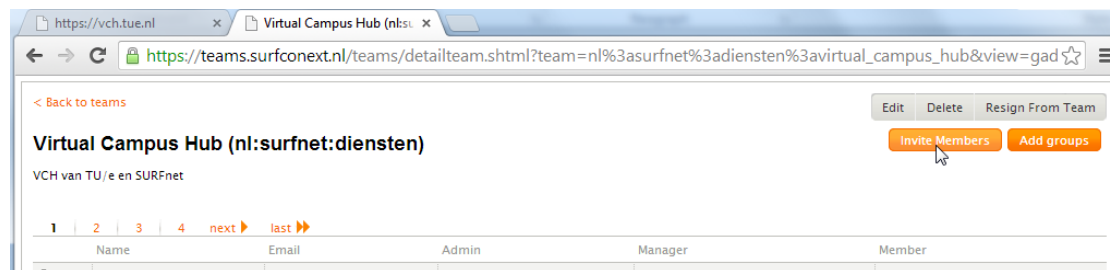
Depending on the permissions you received, you may be able to manage the VCH environment yourself. This means you can invite new members to the Virtual Campus Hub team and grant them access to the TU/e MS Sharepoint site. Management of the DTU itslearning accounts is done by the DTU administrator, so you will need to contact her to provide new members with access to DTU itslearning (see section 3.4.3).

3.4.1 Invite new members to the Virtual Campus Hub team

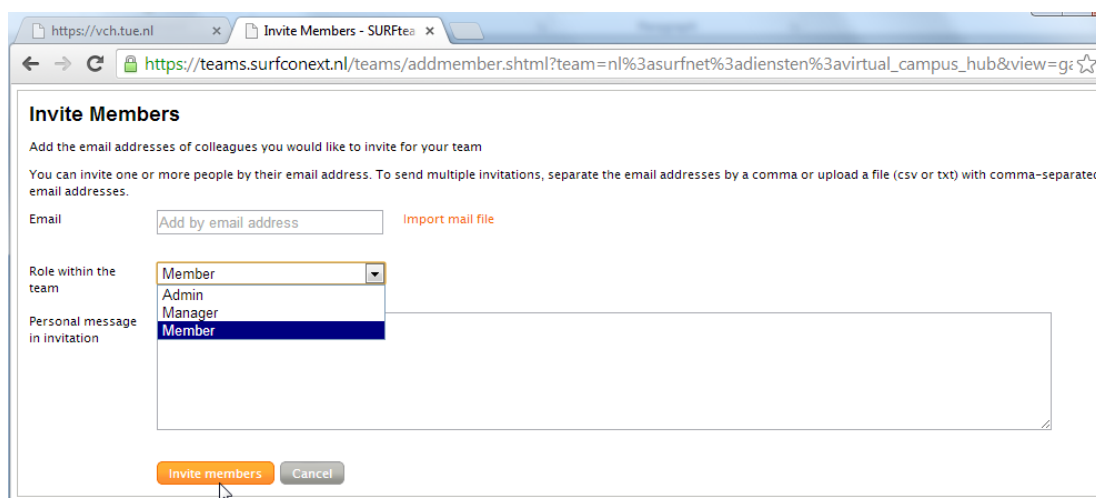
Ask your new member to-be to follow steps 3.1 (if needed) and the first step in 3.2 (provide the email address). Then go to the VCH portal, login, click *Virtual Campus Hub group memberships* and click on the team *Virtual Campus Hub*.



Click the Virtual Campus Hub team in the list of teams



Click Invite Members to invite new members



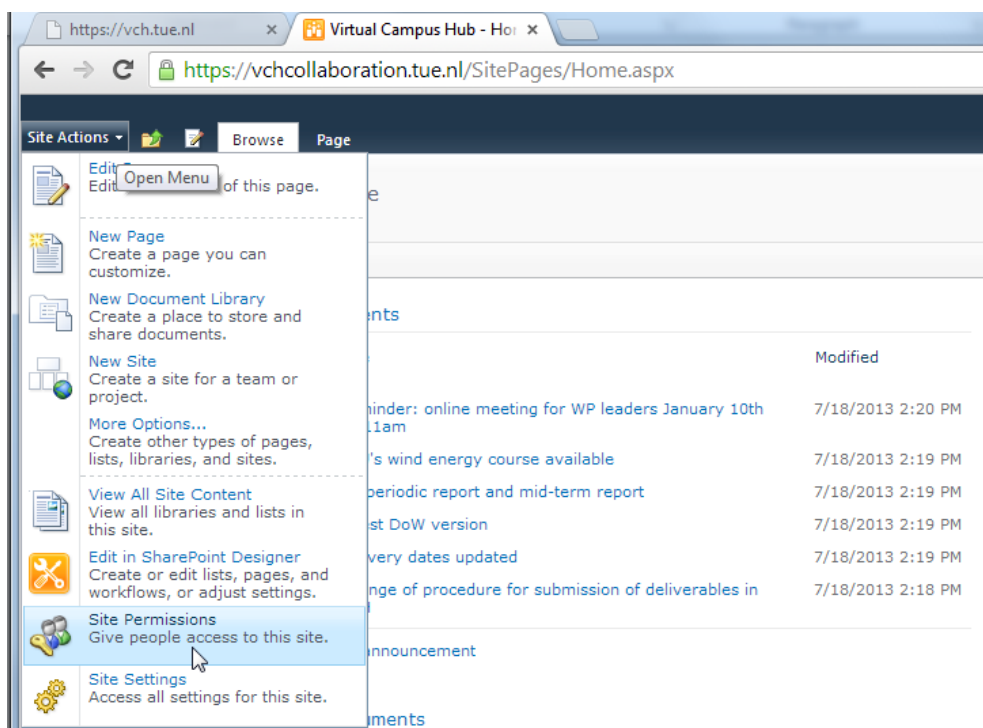
Add the email address(es), select the role and click Invite Members

Then choose the role of the new member for the Virtual Campus Hub team (member, manager or administrator – member will usually be sufficient) and send the invitation by clicking *Invite members*. You will see the pending invitations below the list of group members.

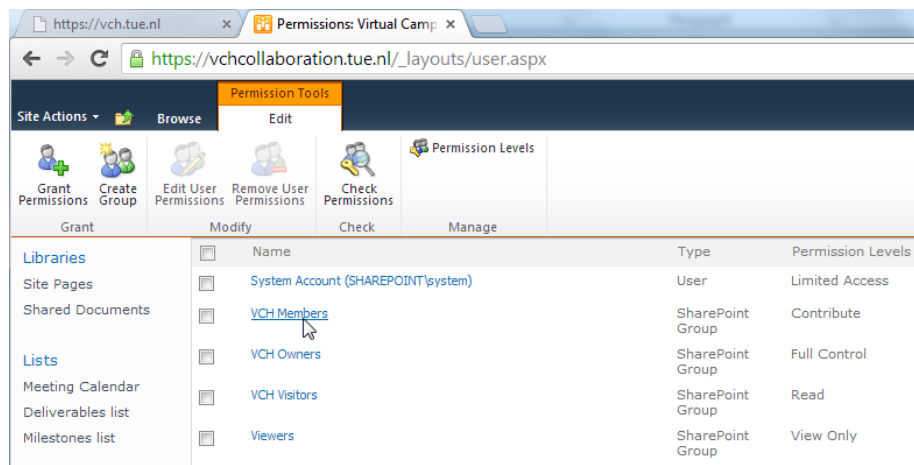
Now wait until your invitation to new members has been accepted. You can verify this by checking if the invitations are still pending. If not, you must be able to see the new members in the list of members.

3.4.2 Grant access to the VCH applications (TU/e MS Sharepoint)

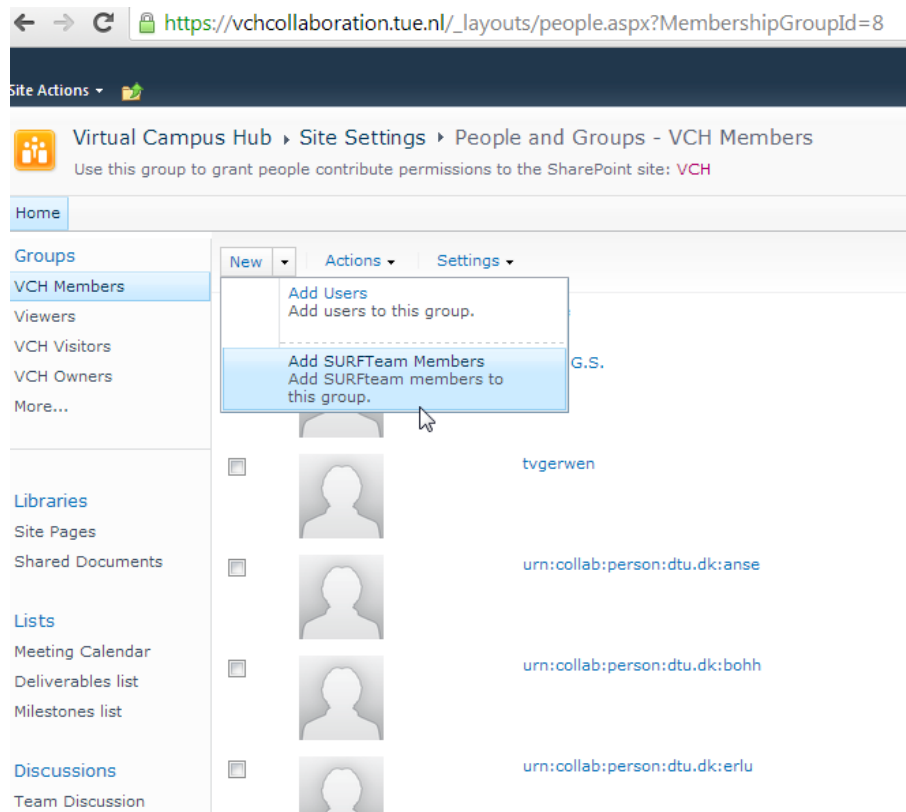
Once the invitation has been accepted by the new members, you can update the list of users in TU/e MS Sharepoint. In the VCH portal, click *TU/e collaboration environment*. Then follow the instructions below.



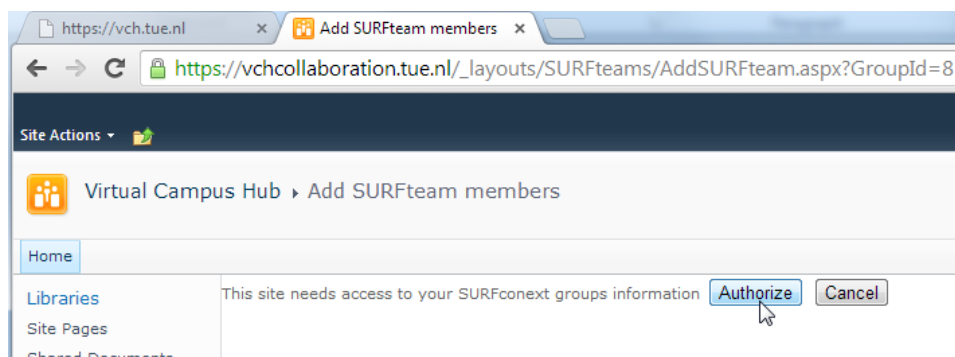
Click Site Actions, Site Permissions to enter the permissions menu



Click the MS Sharepoint group where you want to add the new members



Click New, Add SURFteam Members to add federated users



Click Authorize to enable accessing the SURFteams group information from the MS Sharepoint site

You will now be asked for permission to use some of your federated attributes to be shared with SURFteams/SURFconext. Click *Grant Access* to do so.

Site Actions

Virtual Campus Hub > Add SURFteam members

Home

Libraries
Site Pages
Shared Documents

Lists
Meeting Calendar
Deliverables list
Milestones list

Discussions
Team Discussion

Recycle Bin
All Site Content

Selected SharePoint group
The SharePoint group you will add these users to.
Selected group: VCH Members

SURFteam
Select the SURFteam from which you want to add it's member to the SharePoint group.

SURFteam members
Select the SURFteam members you want to add to the SharePoint group.

SURFteam:
VCH - TUE
VCH - TUE
VCH test
VHC
Virtual Campus Hub

Members:
☒ Name
☒ Megens, M.M.A.M.
☒ Gorp, J.H.T.M. van
☒ Vercoulen, F.J.H.M.

Add Cancel

Select the SURFteam Virtual Campus Hub from the list (if you are member of more than one team)

Then select one or more members (or all members) from the Virtual Campus Hub team and click *Add* to add them to the selected MS Sharepoint group (VCH Members, VCH Owners, VCH Visitors). Once this is done, the new members have access to the TU/e collaboration environment with the permissions just granted.

3.4.3 Grant access to the VCH applications (DTU itslearning)

Once you received name, email address and Net-ID from the new user (see §3.3), send this information to the DTU administrator. Once she created an account in itslearning for this new user, he will be able to access the DTU course on wind energy via federated logon.